Southern Forest Pest Reporter

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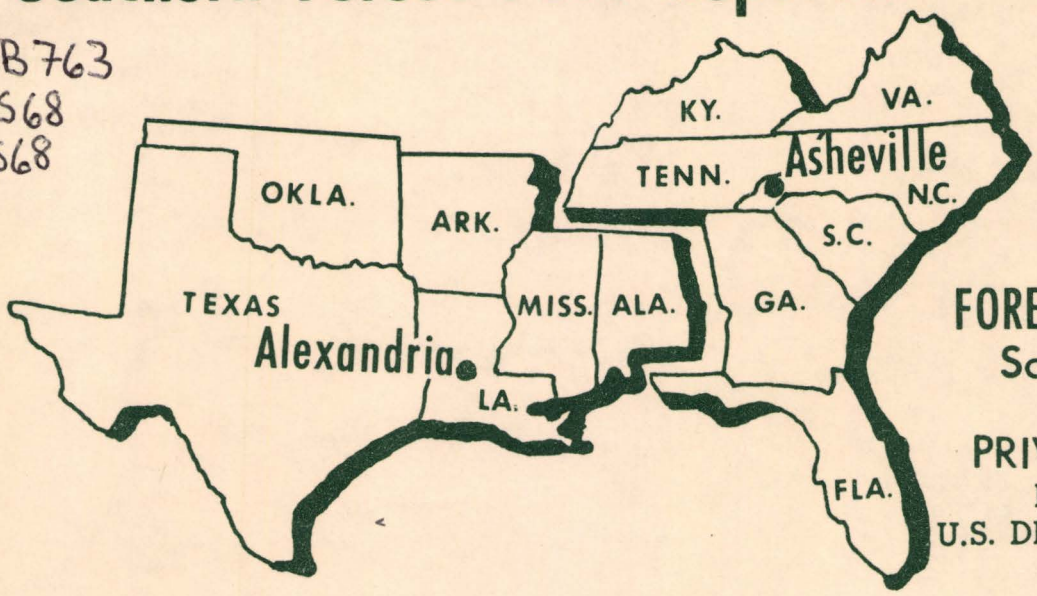


DIVISION OF
FOREST PEST CONTROL
Southeastern Area
STATE AND
PRIVATE FORESTRY
FOREST SERVICE
U.S. DEPT OF AGRICULTURE

FIELD OFFICES
Asheville, N.C.-Alexandria, La.

Number 1 1720 Peachtree St., N.W., Atlanta, Georgia 30309 February, 1971

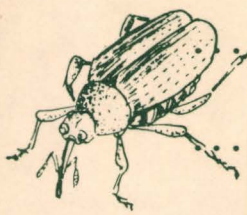
SUMMARY OF CONDITIONS

....Southern pine beetle populations have increased to serious levels on the Tusquitee and Cheoah Districts of the Nantahala National Forest in western North Carolina, and the Tellico District of the Cherokee National Forest in Tennessee. Heavy timber losses are also occurring in Accomack County, Virginia. Beetle populations collapsed in South Carolina this past summer and are at very low levels. Very low levels of infestation have also been observed in Texas, Louisiana, and Mississippi, but high brood densities in scattered trees could result in some losses this spring.

....Increased activity and high populations of the ips engraver beetle have been observed in South Carolina, Texas and Florida.

....Black turpentine beetle remains at epidemic levels in South Carolina on the Sand Hills and Cheraw State Forests.

....New infestations of the balsam woolly aphid have been detected on Roan Mountain, the Blue Ridge Parkway and Mt. Mitchell.



....Dutch elm disease was confirmed for the first time in South Carolina during 1970 in Oconee County at Newry, South Carolina.

....An unknown needle disorder is causing needle damage to slash pine along the Gulf Coast, especially in Mississippi, with trees showing symptoms in Louisiana, Alabama and Florida. Efforts are being made to determine the cause of this needle condition.

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STATUS OF FOREST INSECTS

SOUTHERN PINE BEETLE, *Dendroctonus frontalis*, Zimm.

LOUISIANA

Infestation on the Catahoula and the Evangeline Ranger Districts, Kisatchie National Forest, are at relatively low levels. Several multiple tree spots have been detected on the Winn Ranger District and with favorable conditions, an increase in southern pine beetle populations could occur this spring and summer.

Infestations on the Vernon Ranger District are very active, especially in the Fort Polk Restricted Area where several very large spots up to 50 acres in size have been located. Should conditions remain favorable, this could present a hazardous situation in the spring.

On a state wide level, southern pine beetle populations are at a low level. Moderate activity has been reported in the Parishes of Caldwell, LaSalle and Winn.

MISSISSIPPI

Southern pine beetle populations are not causing widespread losses at the present time on the Homochitto National Forest. High brood densities and ratio of increase in scattered trees could result in severe losses in the spring.

NORTH CAROLINA

Southern pine beetle populations increased to a serious level during late fall on the Tusquitee and Cheoah Districts of the Nantahala National Forest and adjoining lands. Biological evaluations conducted by the Division of Forest Pest Control in early December revealed 937 infested trees on a portion of the Cheoah District, 4800 infested trees on the Tusquitee District and 829 infested trees on the Great Smoky Mountains National Park lands north of Fontana Lake. Brood densities were low to moderate and averaged 199 beetles per square foot of bark on the Tusquitee District and 333 on the Cheoah District.

Woodpecker predation is believed to be an important factor affecting the beetle population in western North Carolina and Tennessee. The Division of Forest Pest Control is evaluating the role of woodpeckers in reducing southern pine beetle populations in this area during the winter months.

NORTH CAROLINA (Cont'd)

The potential for increased timber damage by the southern pine beetle in western North Carolina is high. The population level in the spring will depend on the severity of the winter, amount of predation, and the intensity of suppression by State, Federal and private industry.

SOUTH CAROLINA

An aerial reconnaissance and ground survey conducted by the South Carolina State Commission of Forestry in late summer indicated a collapse of the southern pine beetle population. Ground detection reports from field personnel since the survey indicated that the population continues to remain at a very low level. (South Carolina State Commission of Forestry)

TENNESSEE

Southern pine beetle activity was at a high level on the Tellico District of the Cherokee National Forest. An evaluation made in December found an estimated 2280 infested trees on the area and a high potential for increased timber mortality in 1971. Brood density averaged 249 ± 15 beetles per square foot of bark surface. The District is currently salvaging infested timber and piling and burning infested trees where salvage is not feasible. Southern pine beetle activity continues at a low level in other previously infested areas of the State.

TEXAS

Very few spots of dead and dying trees were detected on the Angelina and Sabine National Forests. Ground examinations revealed endemic populations on the Yellowpine District and moderate populations with some potential for increased activity on the Angelina and Tenaha Districts. In the rest of the state, southern pine beetle activity has been replaced on a smaller scale by the activity of Ips engraver beetles.

VIRGINIA

A late season increase of southern pine beetle activity resulted in heavy timber losses in Accomack County, Virginia. The area of infestation on the Delmarva Peninsula extends through Accomack County north into Worchester County, Maryland.

An aerial photographic and ground evaluation conducted by the Division of Forest Pest Control in January, 1971 found an estimated 119 ± 61 infested trees per M acres host type (68 percent confidence limits) in Accomack County, Virginia. Brood density averaged 359 ± 36 beetles per square foot of bark surface.

SOUTHERN PINE BEETLE (Cont'd)

VIRGINIA (Cont'd)

The Virginia Division of Forestry reported that salvage operations were progressing slowly due to a labor shortage and lack of suitable markets.

Southern pine beetle activity continued on the Colonial National Historical Park and Parkway and adjoining land on the Virginia Peninsula. The National Park Service is currently removing infested timber from Park Service lands to prevent further spread of the infestations.

IPS ENGRAVER BEETLES, *Ips* spp.

ARKANSAS

Some localized activity has been reported near Pine Bluff and Amity, Arkansas. Infestations have been confined to mostly single tree spots. Populations are considered at endemic levels at the present. (Arkansas Pest Reporter)

FLORIDA

The fourteenth annual aerial survey of Florida conducted by the Florida Division of Forestry revealed *Ips* causing the majority of pine tree losses in the State. Tree mortality from all causes decreased from 1,251,360 trees in 1969 to 968,364 trees in 1970.

SOUTH CAROLINA

High populations of ips engraver beetles revealed during the fall survey of the South Carolina Piedmont have subsided.

Populations of pine engravers are also back to normal in a 20,000 acre area in Union and Newberry Counties. (South Carolina State Commission of Forestry)

TENNESSEE

The Tennessee Division of Forestry reported an unusual problem with engraver beetles on Hiwassee Land Company land. Sixteen-hundred grafted superior trees which ranged from 15 to 40 feet high were moved 10 miles to a new location. Fifty-six of the trees were killed by *Ips avulsus* and *I. grandicollis*. (Eich)

TEXAS

There has been a slight increase in *Ips* activity that corresponds with the downward trend of Southern pine beetle populations. Most of the activity is confined to heavily stocked plantations.

BLACK TURPENTINE BEETLE, *Dendroctonus terebrans* (Oliv.)

ARKANSAS — Most infestation of black turpentine beetle have been very localized near Amity and Huttig, Arkansas. Infestations are not sufficiently abundant to cause concern at the present time. (Arkansas Pest Reporter)

FLORIDA — The Florida Division of Forestry reported that black turpentine beetle populations were below normal.

SOUTH CAROLINA — Black turpentine beetle populations continue to cause damage on the 92,000 acre Sand Hills State Forest and 7,000 acre Cheraw State Park. A 100 percent sketch map survey of the Sand Hills State Forest in September, 1970 revealed an estimated 732 M board feet of timber and 151 cords of pulpwood killed by bark beetles (primarily black turpentine beetle). The survey revealed 851 bark beetle spots containing a total of 8,122 trees.

Severe stand disturbance caused by intensive salvaging of storm damaged timber and a drought in 1970 were cited as important factors in the current black turpentine beetle outbreak. Suppression and salvage operations are presently underway in these areas. (South Carolina State Commission of Forestry)

LOUISIANA — Black turpentine beetle is being found in all southern pine beetle spots. Both beetles are attacking mature trees under stress. No *Ips* beetles were found in these winter broods.

TEXAS — Black turpentine beetle remains at endemic levels on the National Forests. Most reports of black turpentine beetle in other areas have been in conjunction with *Ips* activity.

BALSAM WOOLLY APHID, *Adelges piceae* (Ratz.)

NORTH CAROLINA — New infestations were detected on Roan Mountain in Tennessee and North Carolina along the road to Heintooga Overlook in the Great Smoky Mountains National Park in North Carolina and along the Blue Ridge Parkway in the Balsam Mountains of North Carolina. Most of the previously detected infestations are continuing. The aphid is also beginning to reinfest the protection zones on Mt. Mitchell.

PINE SAWFLIES, *Neodiprion* spp.

FLORIDA — A black-headed pine sawfly *N. excitans* Roh. caused moderate to severe defoliation of 500 acres in Taylor County, Florida. (Florida Division of Forestry)

TENNESSEE — In addition to the many species of sawflies occurring throughout the State, another sawfly identified as *N. virginianus* Ross was collected from Virginia pine in Hamilton County. (Tennessee Forest Pest Monitor)

VIRGINIA — The annual roadside egg survey for the Virginia pine sawfly, *N. pratti pratti* (Dyar) has been completed. Populations are on the increase throughout the State. At least light defoliation is predicted for much of the Piedmont and Coastal Plain with moderate to heavy defoliation predicted in parts of Fairfax, Patrick, Goochland and Essex Counties. A new area of concern is near Fredericksburg where all four survey plots indicate that heavy defoliation will occur this spring. (Virginia Division of Forestry)

TIP MOTH, *Rhyacionia frustrana* (Comstock)

ARKANSAS — Overwintering populations of tip moth pupae at the Ouachita Seed Orchard varies from 14-44 percent infested tips. Shortleaf pine is the only species represented at this orchard.

TEXAS — Small static infestations of tip moth have been reported from the Linden and Jefferson areas. Shortleaf and loblolly pines were both reported to be infested. An 80 acre plantation of loblolly pine was reported infested in the Conroe area. This infestation was increasing in intensity. (Texas Pest Activity Report)

NORTH CAROLINA — Overwintering populations of tip moth pupae on the Beech Creek Seed Orchard ranged from 31 to 97 percent of the trees infested. Both Virginia pine and shortleaf pine were infested.

SOUTH CAROLINA — Populations of overwintering tip moth pupae on the Francis Marion Seed Orchard ranged from 87 to 14 percent of the trees infested and 3.5 to 57.0 percent of the tips infested. Both shortleaf and loblolly pine were infested.

SEED AND CONE INSECTS

TEXAS — Seed orchards and seed production areas throughout east Texas have been severely damaged by seed and cone insects. Insects of the genus *Dioryctria* have been most often observed. Cone bugs, *Leptoglossus corculus* (Say), have appeared in large numbers. The importance of the insect to seed production limitations is unknown. (Texas Pest Activity Report)

HARDWOOD DEFOLIATORS

VARIABLE OAK LEAF CATERPILLAR, *Heterocampa mateo* Dbldy.

ARKANSAS — A winter evaluation of prepupal survival of the variable oak leaf caterpillar was conducted by the Arkansas Forestry Commission and the Division of Forest Pest Control. Mean counts of prepupae varied from 0.40/ft^2 in the Batesville area to 0.98/ft^2 in the Heber Springs area. Many sample locations had high prepupal counts. Unless above average prepupal mortality occurs by spring, many hardwood areas will experience heavy defoliation this next growing season.

SOUTH CAROLINA — A 200 acre area in the north central portion of the state was defoliated by the variable oak leaf caterpillar. State field personnel reported the defoliation late in the fall after the larvae had dropped to the ground to overwinter. Turkey-oak comprised over 99 percent of the heavily defoliated area. The defoliation was considered beneficial since the turkey oak was competing with planted slash pine. (South Carolina State Commission of Forestry)

OAK LEAF TIER, *Croesia semipurpurana* (Kearf)

VIRGINIA — A roadside egg survey for the oak leaf tier (*Croesia semipurpurana*) and the eastern tent caterpillar (*Malacosoma disstria* Hbn) was conducted from Craig County to Frederick County along the West Virginia line. As in the past few years, moderate to heavy defoliation by the oak leaf tier will continue in the western part of Alleghany County. The survey also indicated a new area of moderate to heavy defoliation in western Bath County. Only one forest tent caterpillar egg mass was found along the route. (Virginia Division of Forestry)

THE EVERGREEN BAGWORM, *Thyridopteryx ephemeraeformis* (Haw.)

ARKANSAS — The bagworm was reported as epidemic in the northwest part of Arkansas during the summer of 1970. Epidemic areas included parts of Benton, Washington, Crawford and Franklin Counties. Bagworms were collected and x-rayed from Crawford, Franklin, Cleburne and Faulkner Counties. Radiographs of bags showed high survival of overwintering eggs. A lepidopterous predator, *Dicymolomia julianalis* (Walker) was found actively preying on bagworm eggs. Should above average survival of eggs occur during the winter period, bagworm populations may become more widespread and severe in Arkansas during 1971.

WALKINGSTICK, *Diapheromera femorata* (Say)

ARKANSAS — Walkingstick defoliation was the heaviest in Arkansas in recent years. Approximately 132,729 acres of hardwoods suffered some degree of defoliation, particularly on the northern slopes of Rich, Fourche, Black Fork, Kiamichi and Winding Stair Mountains. Of this, 85,000 acres were heavily defoliated.

FOREST TENT CATERPILLAR, *Malacosoma disstria* Hubner

LOUISIANA — December Forest tent caterpillar egg mass surveys in southern Louisiana by the Louisiana Forestry Commission and the Division of Forest Pest Control showed a decided decrease in numbers of egg masses per 30 inch branch over the previous year. Egg masses were also much less developed than normal. These factors indicate defoliation will be reduced in 1971 from last year.

MISCELLANEOUS INSECTS

WEEVILS, *Hylobius* sp. and *Pachylobius* sp.

ARKANSAS — Weevils, *Hylobius* sp. and *Pachylobius* sp., are reported as causing damage to loblolly seedlings in plantations in Arkansas north of Little Rock.

A CYPRESS LOOPER, *Anacamptodes cypressaria*

FLORIDA — A cypress looper, *Anacamptodes cypressaria* moderately to severely defoliated 15,000 acres in Glades County, Florida. (Florida Division of Forestry)

POPLAR TENTMAKER, *Ichthyura indusa* Hbn.

TEXAS — This insect is appearing in large numbers in eastern cottonwood plantations along the Brazos River in Burleson and Brazos Counties. One and two year old trees have been reported as completely defoliated. (Forest Pest Activity Report, Texas)

MEALY BUG, *Spilococcus juniperi* (Ehrahorn)

TEXAS — This mealy bug has been reported in red berry juniper in the Croton Breaks Area of Dickens County, and many trees are reported dying back. (Forest Pest Activity Report, Texas)

A PINE LOOPER, *Lambdina athasaria pellucidaria*

VIRGINIA — An insect causing late summer defoliation of loblolly, shortleaf and Virginia pines in eastern Virginia was identified as a pine looper (*Lambdina athasaria pellucidaria*). A survey indicated that the insect was active in a 1,500 square mile area that includes twelve Virginia counties northeast of Richmond. Although an occasional Virginia pine was completely defoliated, the average defoliation in a single stand never exceeded 50 percent. In much of the area, defoliation was negligible. Evaluations of the potential threat of the insect will be continued in 1971. (Virginia Division of Forestry)

STATUS OF FOREST DISEASES

WHITE PINE BLISTER RUST caused by *Cronartium ribicola* Fischer

VIRGINIA — A heavily infected 125 acre plantation has been found on Mount Rogers National Recreation Area. Eradication was affected, trees with branch cankers will be pruned in an

WHITE PINE BLISTER RUST (Cont'd)

VIRGINIA (Cont'd) attempt to save as many trees as possible for aesthetic values. (Virginia Division of Forestry)

WHITE PINE DECLINE caused by an unknown agent

VIRGINIA The decline and eventual death of individual ornamental white pine has been reported throughout the State. No causal agent common to all cases has been determined, but it appears *Verticicladiella* sp. may be involved along with a "resinous disease condition", the latter caused by a complex of abiotic factors. (Virginia Division of Forestry)

ANNOSUS ROOT ROT caused by *Fomes annosus* (Fr.) Karst

VIRGINIA Yearly re-examination of regenerated area that was previously heavily infested with *Fomes annosus* indicates that after six growing seasons 3.6 percent of the regeneration stems have been lost to the pathogen, with a range in loss per plot of 0.7 - 10.5 percent. (Virginia Division of Forestry)

SCHWEINTZII ROOT ROT caused by *Polyporus Schweinitzii* Fr.

VIRGINIA A white pine plantation in Orange County has been found to contain *Polyporus schweintzii* in 53 percent of the trees. (Virginia Division of Forestry)

OAK WILT caused by *Ceratocytis fagacearum* (Bretz) Hunt

NORTH CAROLINA The annual North Carolina oak wilt survey has revealed new infection centers in only two, Buncombe and Madison, of six counties previously found to contain the disease. Old centers were reactive in both of the above and Haywood and Jackson. No infected trees were found in Swain or Burke. For the first time in 15 years infected trees were not treated; however, the annual survey will continue next year. (North Carolina Forest Service)

LITTLE LEAF caused by *Phytophthora cinnamomi* Rands

NORTH CAROLINA — Little leaf continues to cause damage to shortleaf stands in the Lexington-Shelby areas of North Carolina. To minimize losses special cutting practices have been recommended in many stands containing the disease in these areas. (Division of Forest Pest Control and the North Carolina Forest Service)

DUTCH ELM DISEASE caused by *Ceratocytis ulmi* (Buism) C. Moreau

SOUTH CAROLINA — The disease was discovered for the first time in South Carolina this past summer in an area of dying winged elm *Ulmus alata* Michx. near Newry (Oconee County). The finding has been confirmed by pathologists at Clemson University. (South Carolina State Commission of Forestry)

COMANDRA BLISTER RUST, *Cronartium commandrae* Pk.

TENNESSEE — Several small inactive branch and at least two stem cankers believed to be caused by comandra rust were discovered in a 16-year-old loblolly plantation east of the Cumberland Plateau near Dayton. This is the first known occurrence of comandra rust east of the Plateau. Only two trees were known to have suffered mortality. (Tennessee Division of Forestry)

MIMOSA WILT caused by *Fusarium oxysporum f. perniciosum* (Hept.) Toole

NORTH CAROLINA — This disease has been particularly evident this past summer. Many instances of scattered mortality has been observed throughout the Piedmont and mountains of North Carolina.

WALNUT ANTHRACNOSE caused by *Gnomonia leptostyla* (Fr.) Ces. De Not.

KENTUCKY — Premature defoliation of walnut was observed in scattered areas throughout the past summer. The lateness of the defoliation normally precludes significant damage or growth loss, but is generally early enough to cause landowners concern. (Kentucky Division of Forestry)

OAK DECLINE caused by unknown agent

KENTUCKY — Dieback was expecially noticeable throughout Lewis County on scarlet and black oak this year. The hot, dry summer probably aggravated the situation. (Kentucky Division of Forestry)

AN UNKNOWN NEEDLE BLIGHT

MISSISSIPPI — An unknown needle blight is reported as causing damage to slash pine along the Mississippi Gulf Coast. A survey by the Division of Forest Pest Control shows 137,730 acres affected by the condition on the DeSoto National Forest. Approximately 63,480 acres were classified as light; 58,775 as medium; and 15,475 as heavy. Efforts are being made to determine the cause of this needle condition. This disorder has also been observed along the Gulf Coast of Louisiana, Alabama and Florida.

Figure 1. Adult walkinstick (*Diapheromera femorata*) Say

Figure 2. Defoliation of northern red oak by the walkingstick (*Diapheromera femorata*) Say

Figure 3. X-ray of bagworm showing predation on bagworm eggs by *Dicymolomia julianalis* (Walker)

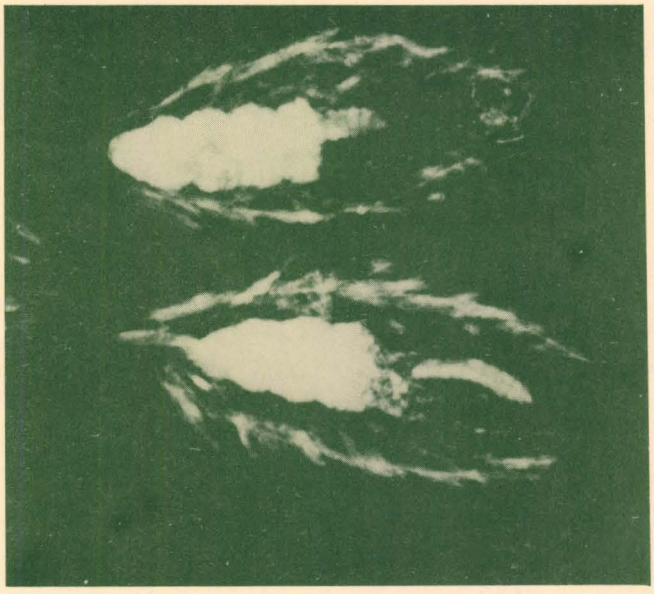

Figure 4. X-ray of bagworm showing feeding by lepidopterus predator *Dicymolomia julianalis* on bagworm eggs

More detailed information can be obtained by writing to the Forest Pest Control Division Field Offices listed below or the Atlanta Office:

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